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Title: METHODS AND COMPOSITIONS FOR ENHANCING CELLULAR FUNCTION
THROUGH PROTECTION OF TISSUE COMPONENTS
Applicant: William H. Frey II, et al.
Serial No: 09/844,450
Docket No.: 1871.1-US-U1

Filed: April 27, 2001
Sheet 1 of 20

**Pyrophosphate Protects the mAChR from
Inactivation by the LMW Inhibitor
(n = 3)**

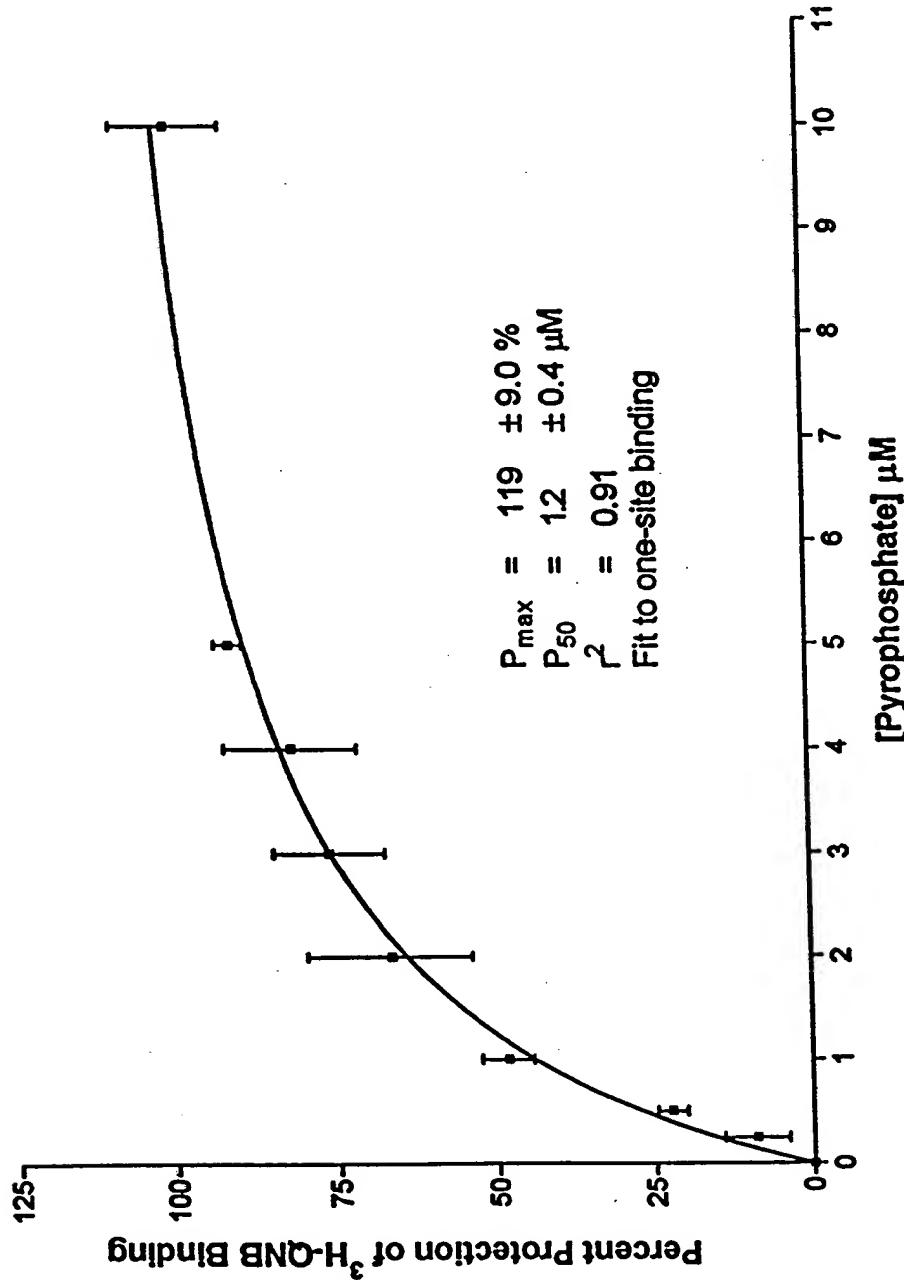


FIGURE 1



Title: METHODS AND COMPOSITIONS FOR ENHANCING CELLULAR FUNCTION
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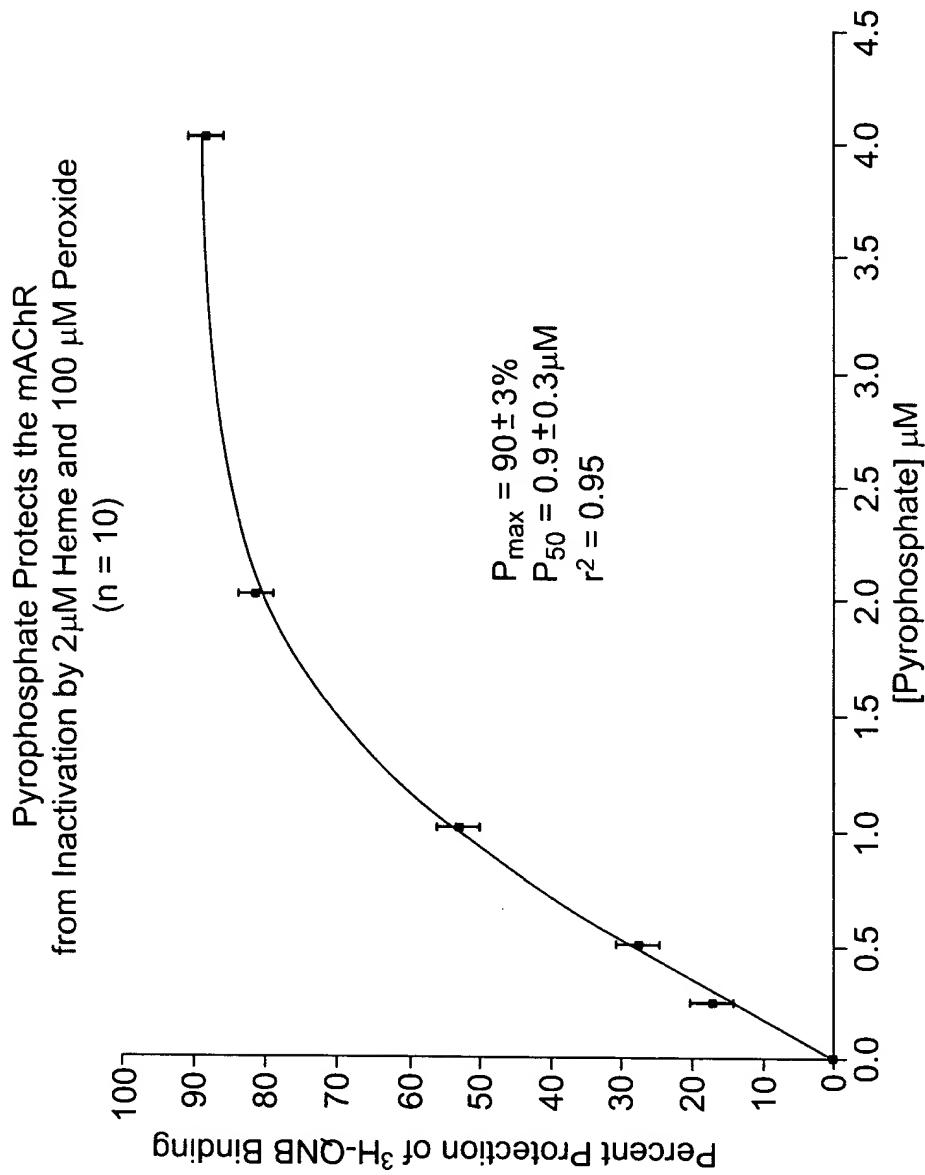


FIGURE 2



Title: METHODS AND COMPOSITIONS FOR ENHANCING CELLULAR FUNCTION
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Pyrophosphate protects the mAChR from
inactivation by the LMW Inhibitor in a
2-step agonist binding assay.
(n = 4)

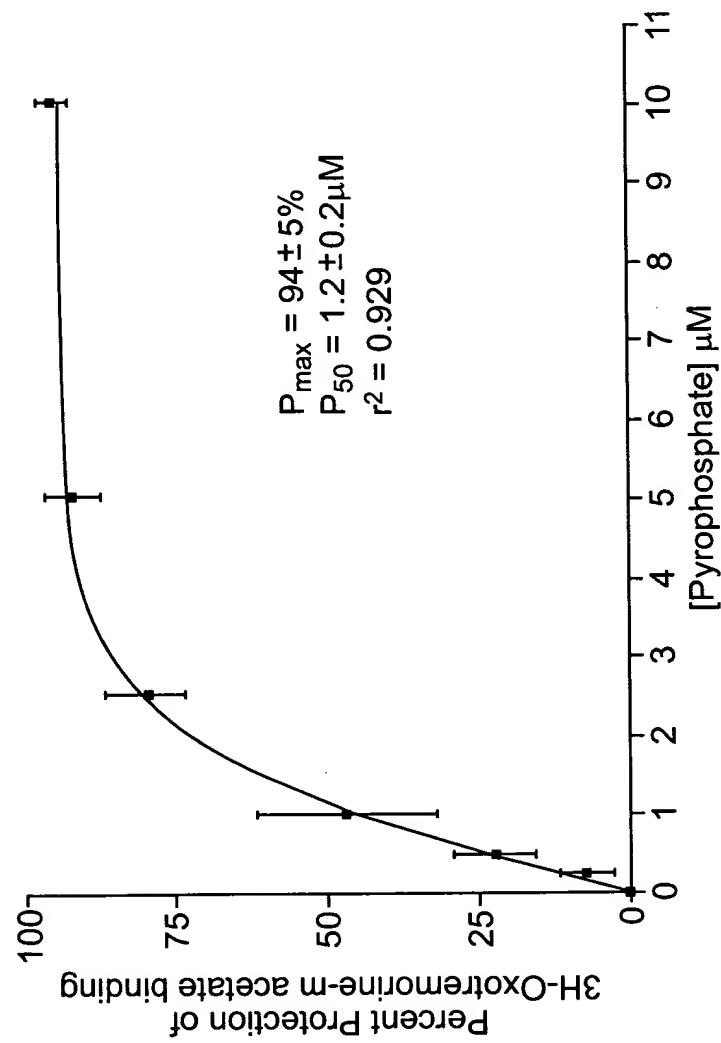


FIGURE 3



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Imidodiphosphate protects the mAChR
from inactivation by the LMW Inhibitor
(n = 5)

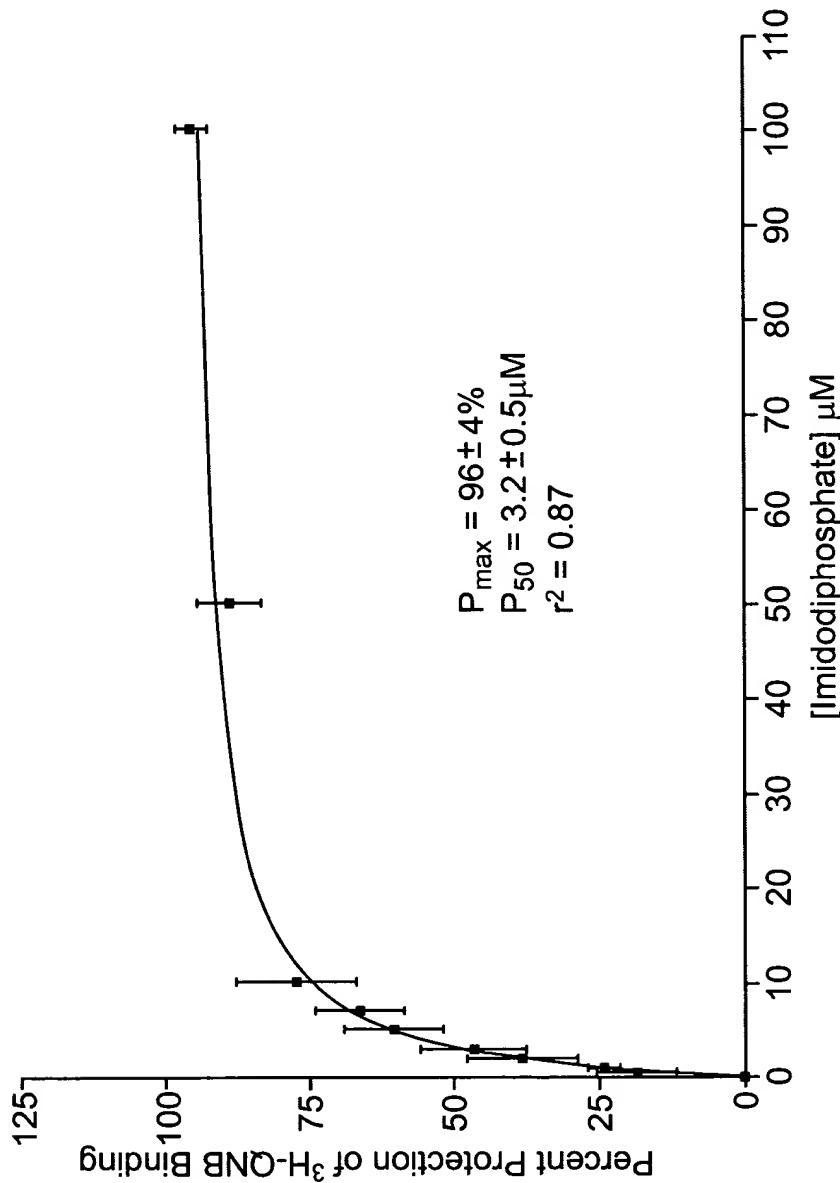


FIGURE 4



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Guanylyliddiphosphate Protects the mAChR
from Inactivation by the LMW Inhibitor
(n = 4)

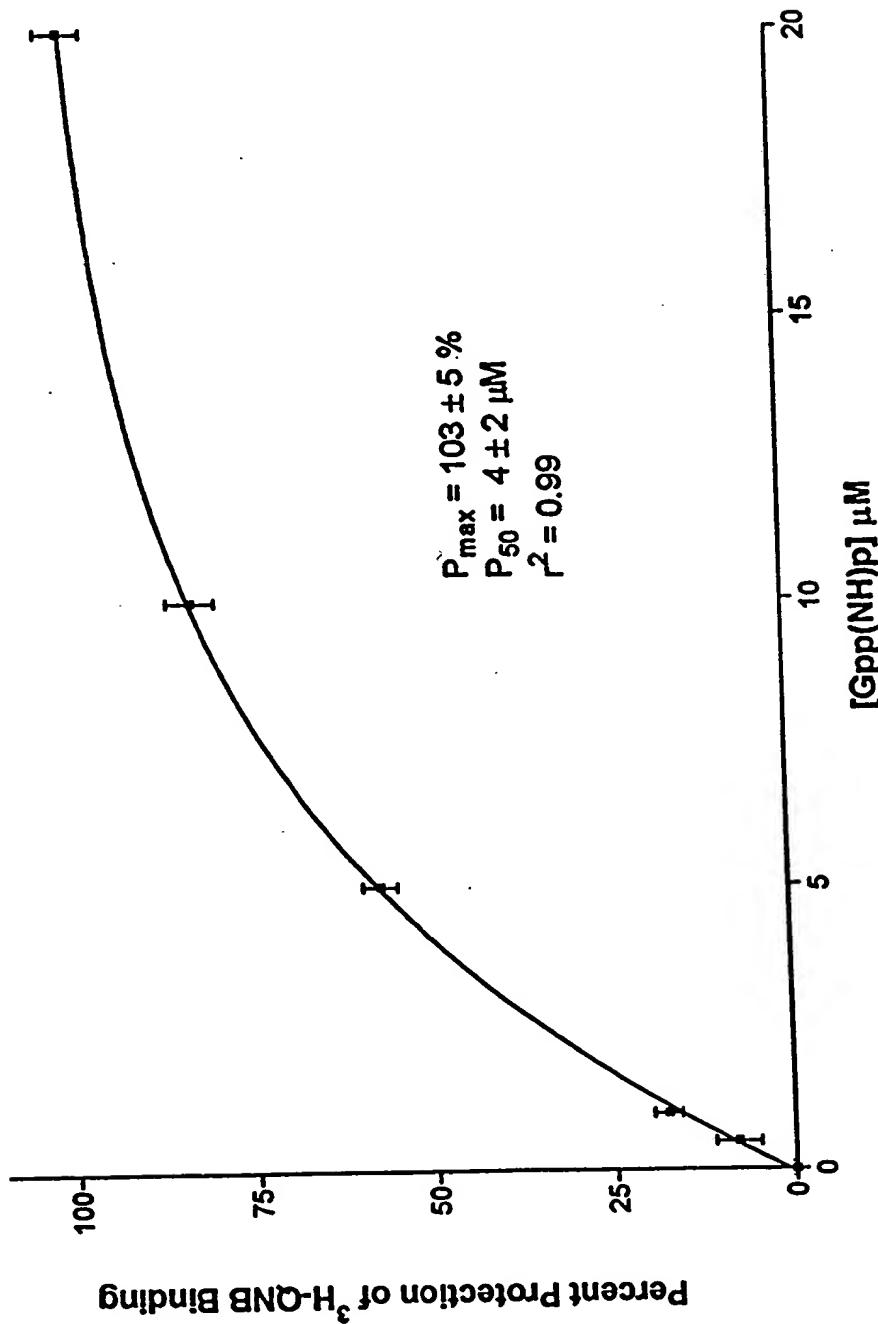


FIGURE 5



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Adenylylimidodiphosphate protects the mAChR from
inactivation by the LMW Inhibitor
(n = 3)

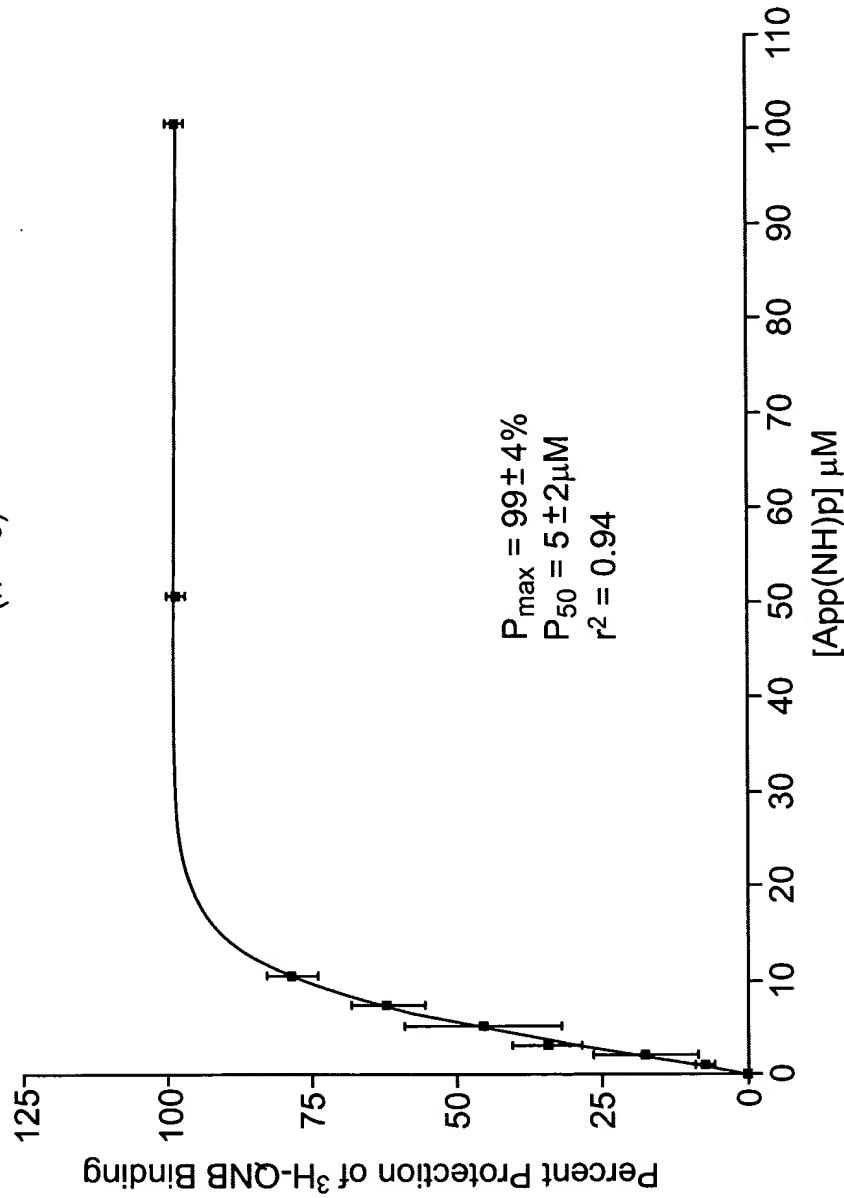


FIGURE 6



Title: METHODS AND COMPOSITIONS FOR ENHANCING CELLULAR FUNCTION
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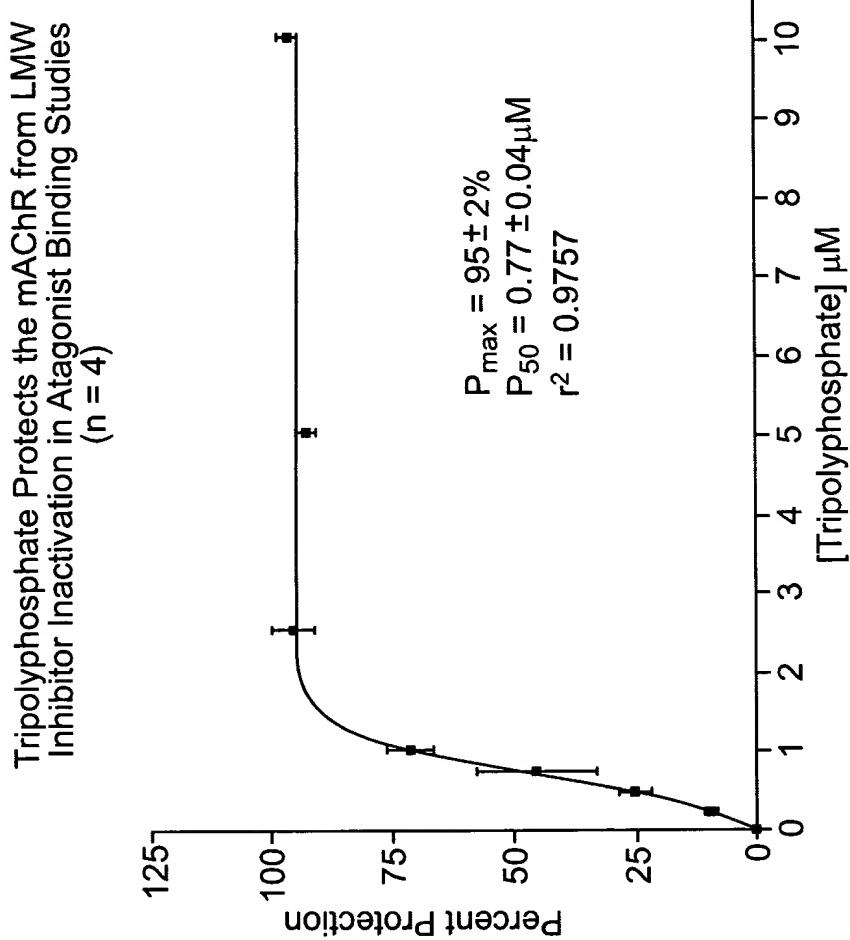


FIGURE 7



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**Bilirubin Protects the mACHR from
Inactivation by the LMW Inhibitor
(n = 4)**

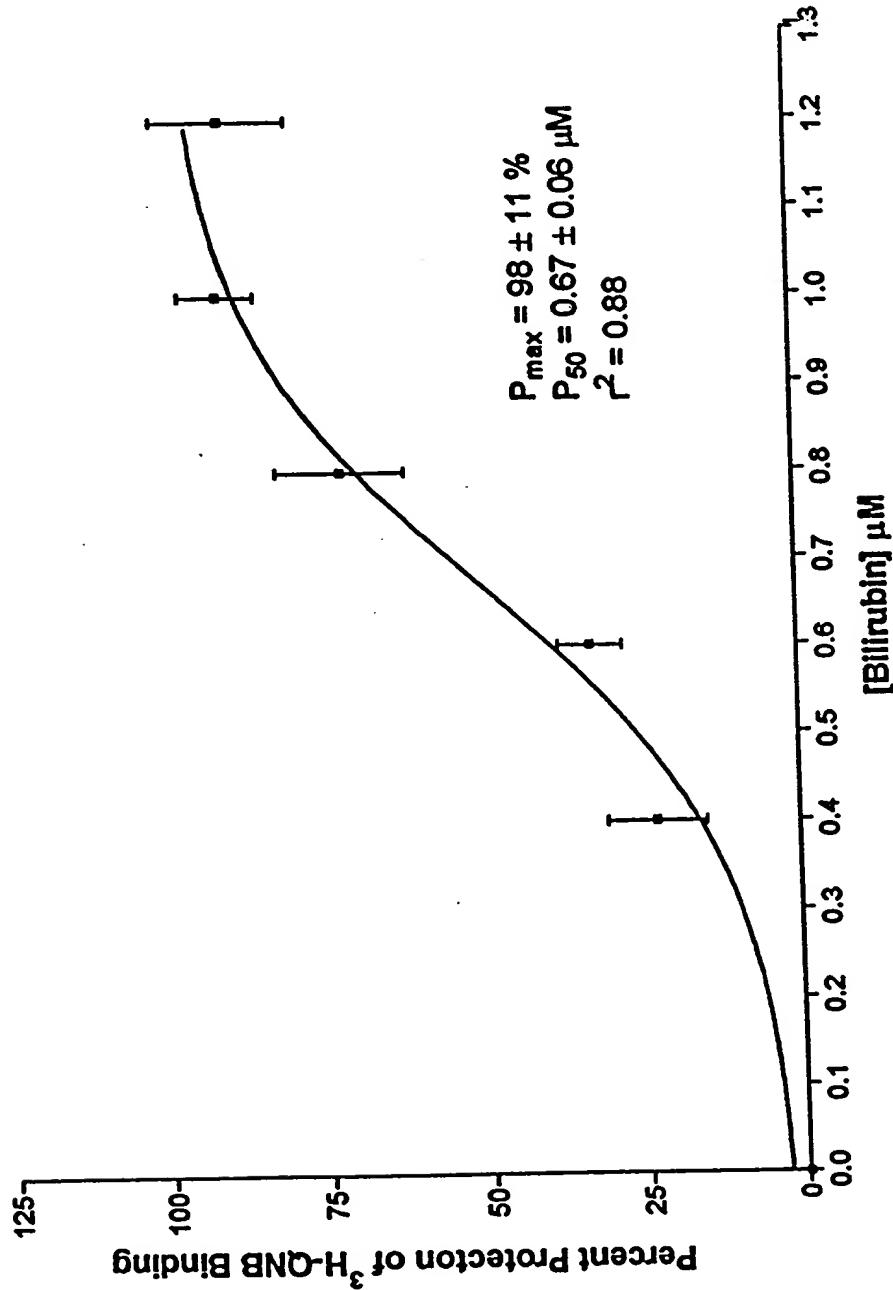


FIGURE 8



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**Bilirubin Protects the mAChR from
Inactivation by 2.0 μ M Heme and 100 μ M Peroxide
(n = 4)**

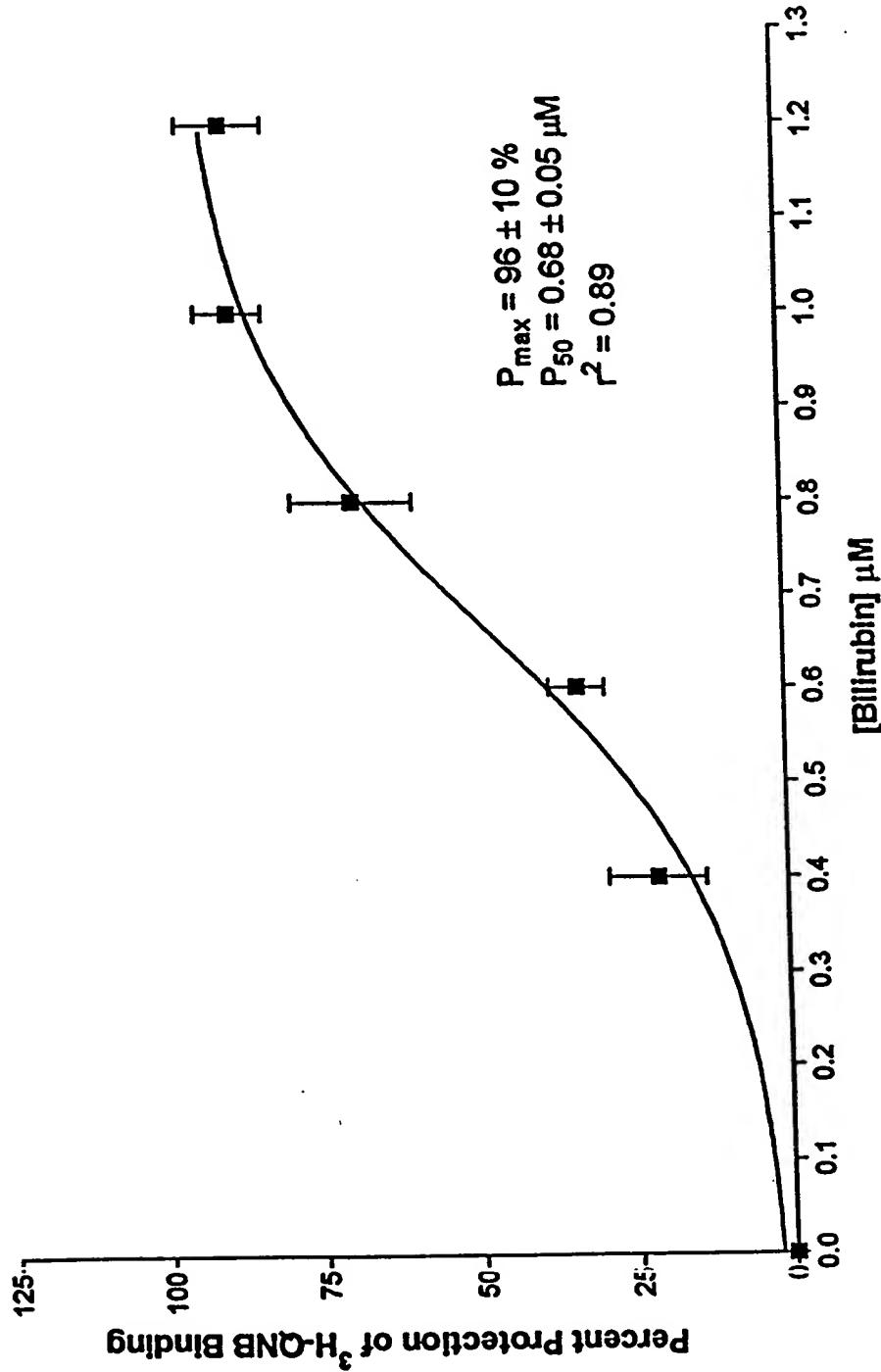


FIGURE 9



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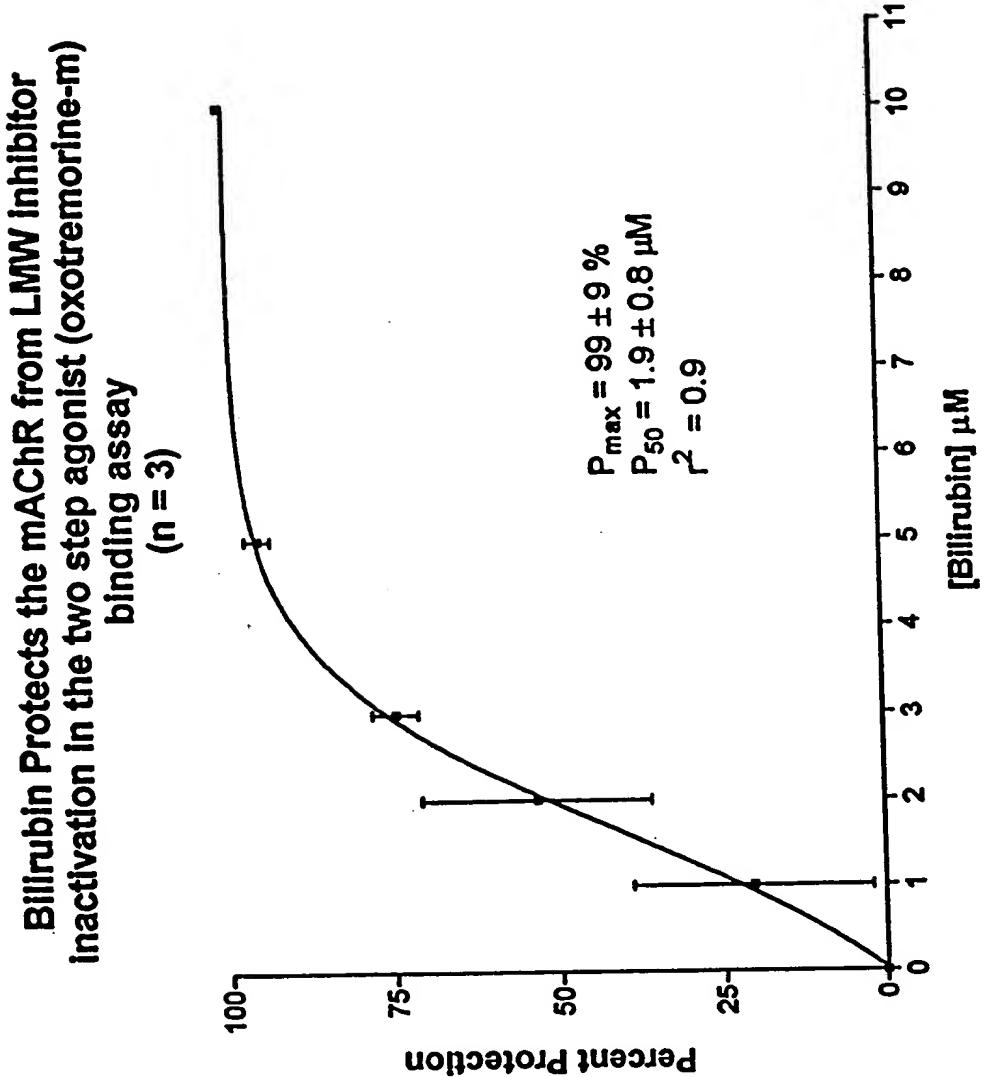


FIGURE 10



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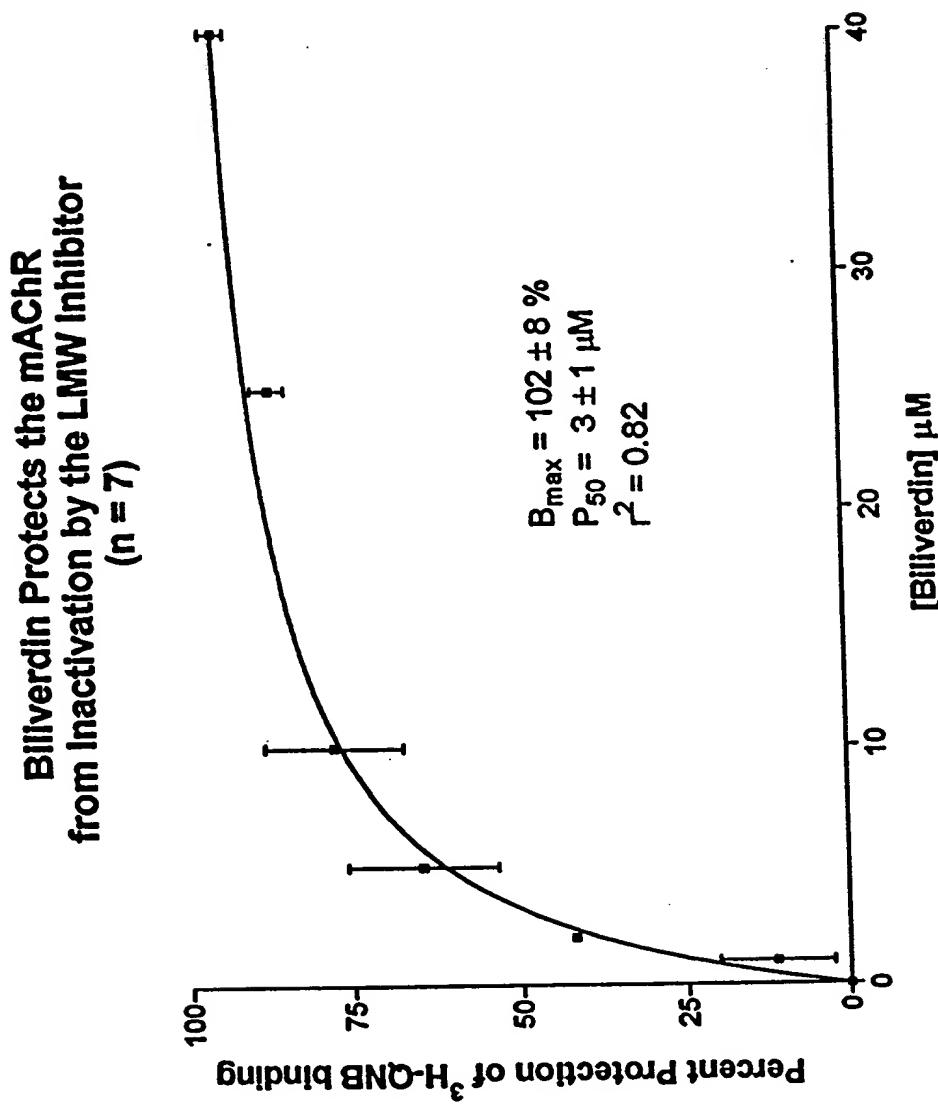


FIGURE 11



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**1 μ M Carnosol completely protects the mACHR
from inactivation by the LMW Inhibitor.**

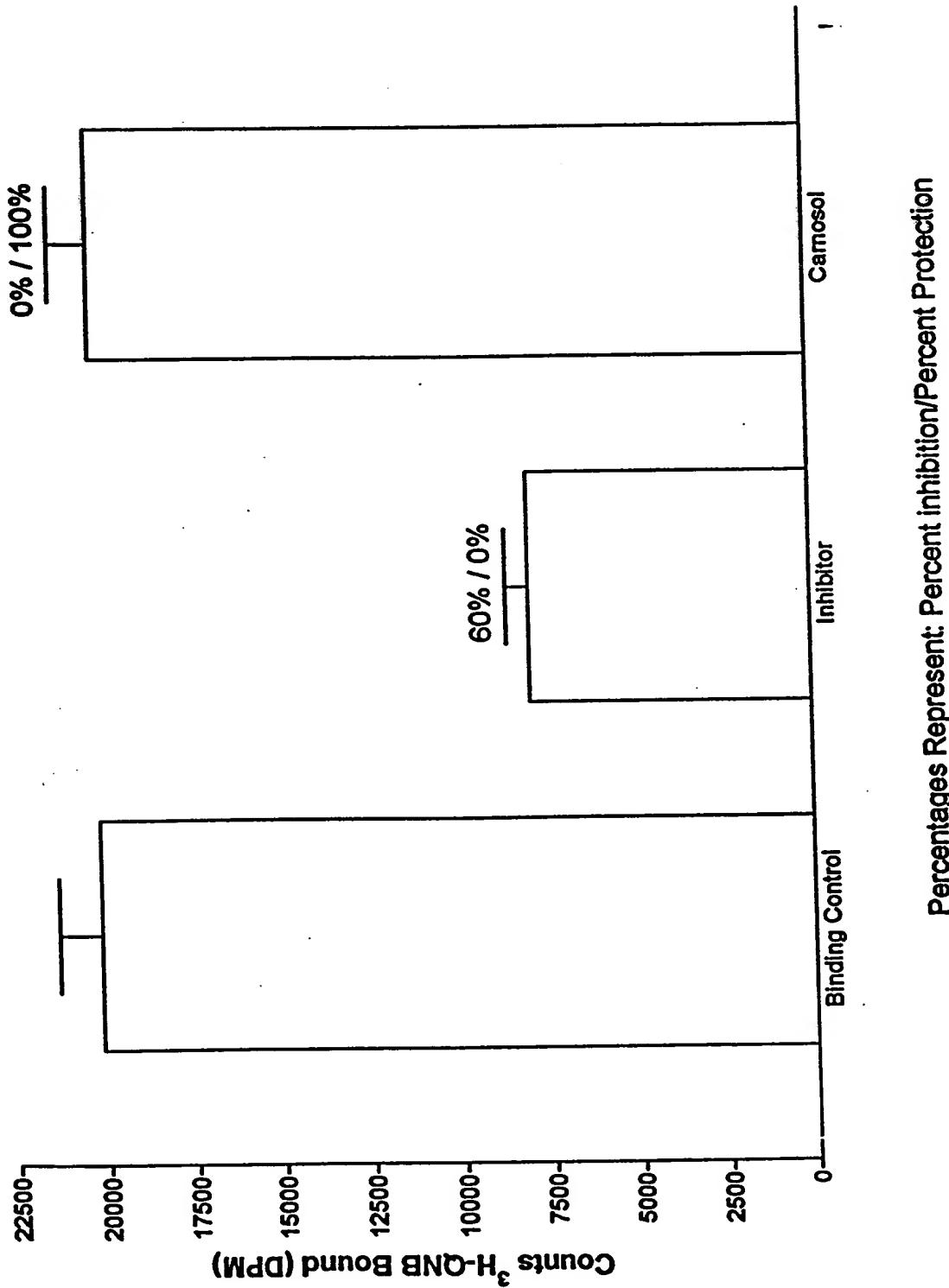


FIGURE 12



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Quercetin protects the mAChR
from Inactivation by the LMW Inhibitor
(n = 3)

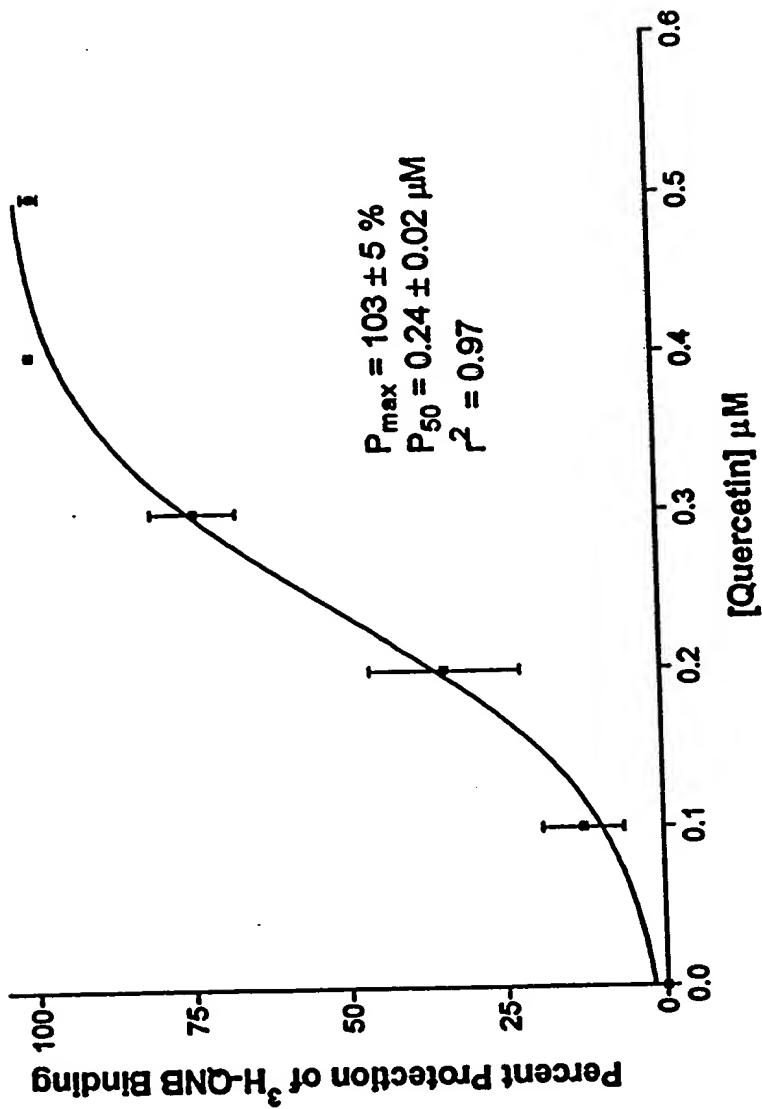


FIGURE 13



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**Myricetin Protects the mAChR
from Inactivation by Heme and Peroxide**

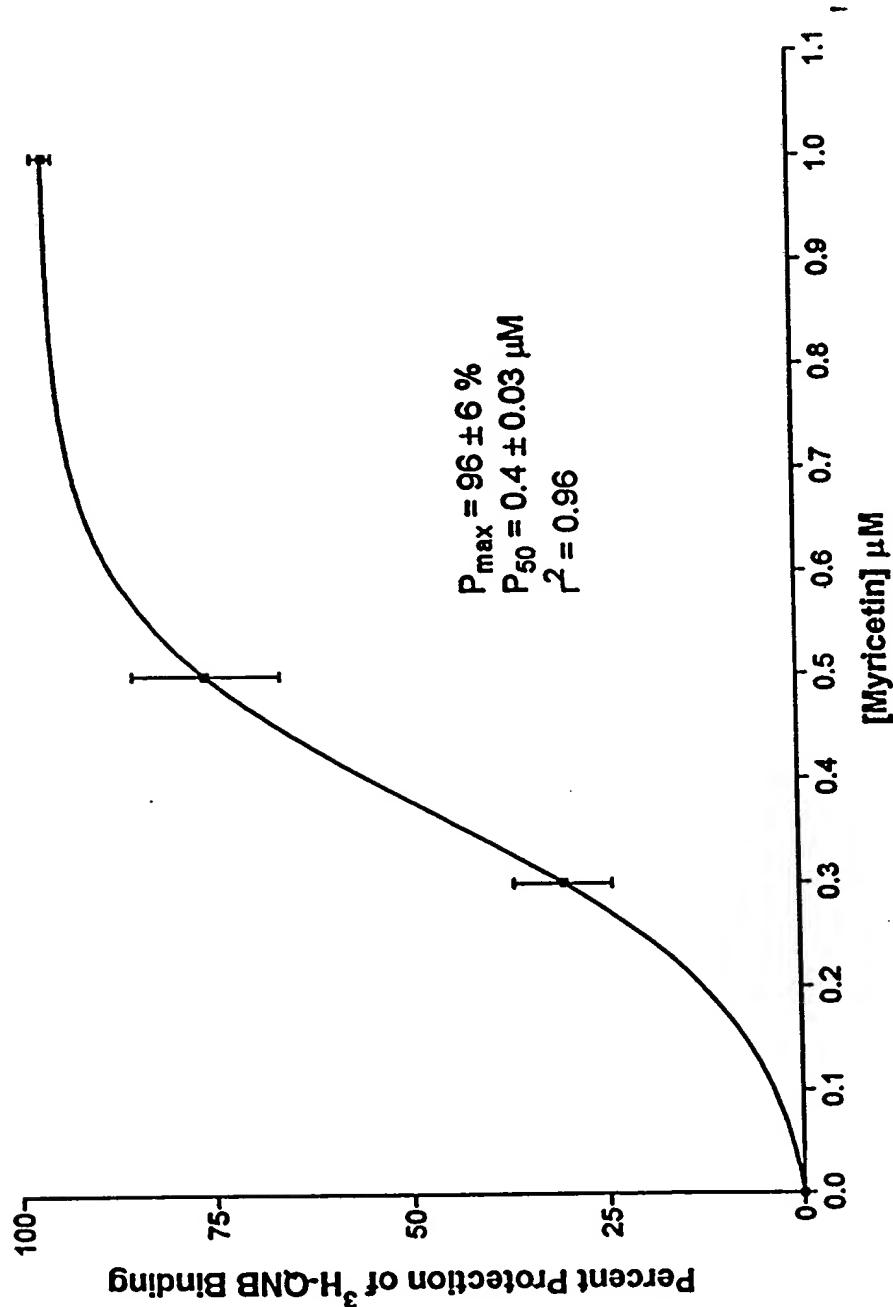


FIGURE 14



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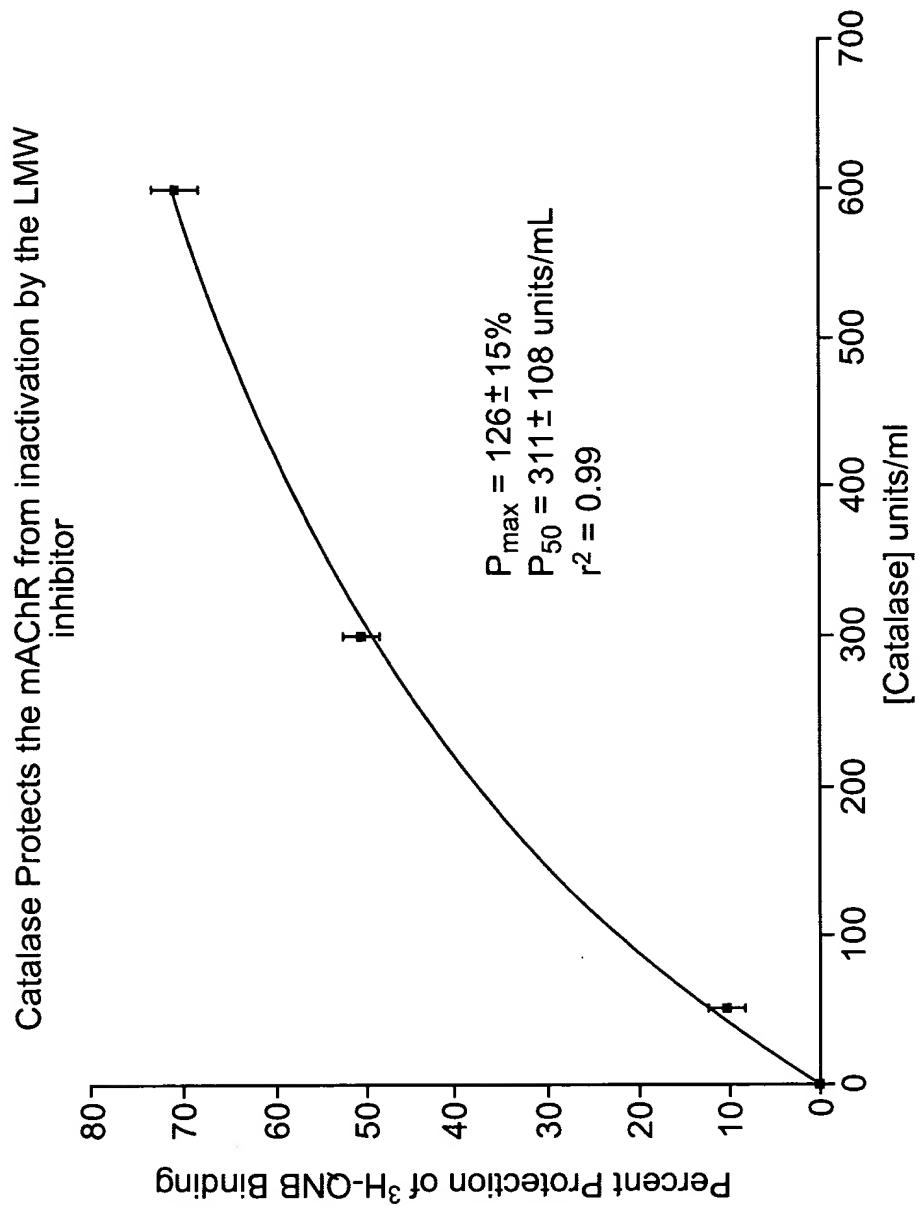


FIGURE 15



Title: METHODS AND COMPOSITIONS FOR ENHANCING CELLULAR FUNCTION
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**Catalase Protects the mAChR from
Inactivation by 2.0 μ M Heme and 100 μ M Peroxide**

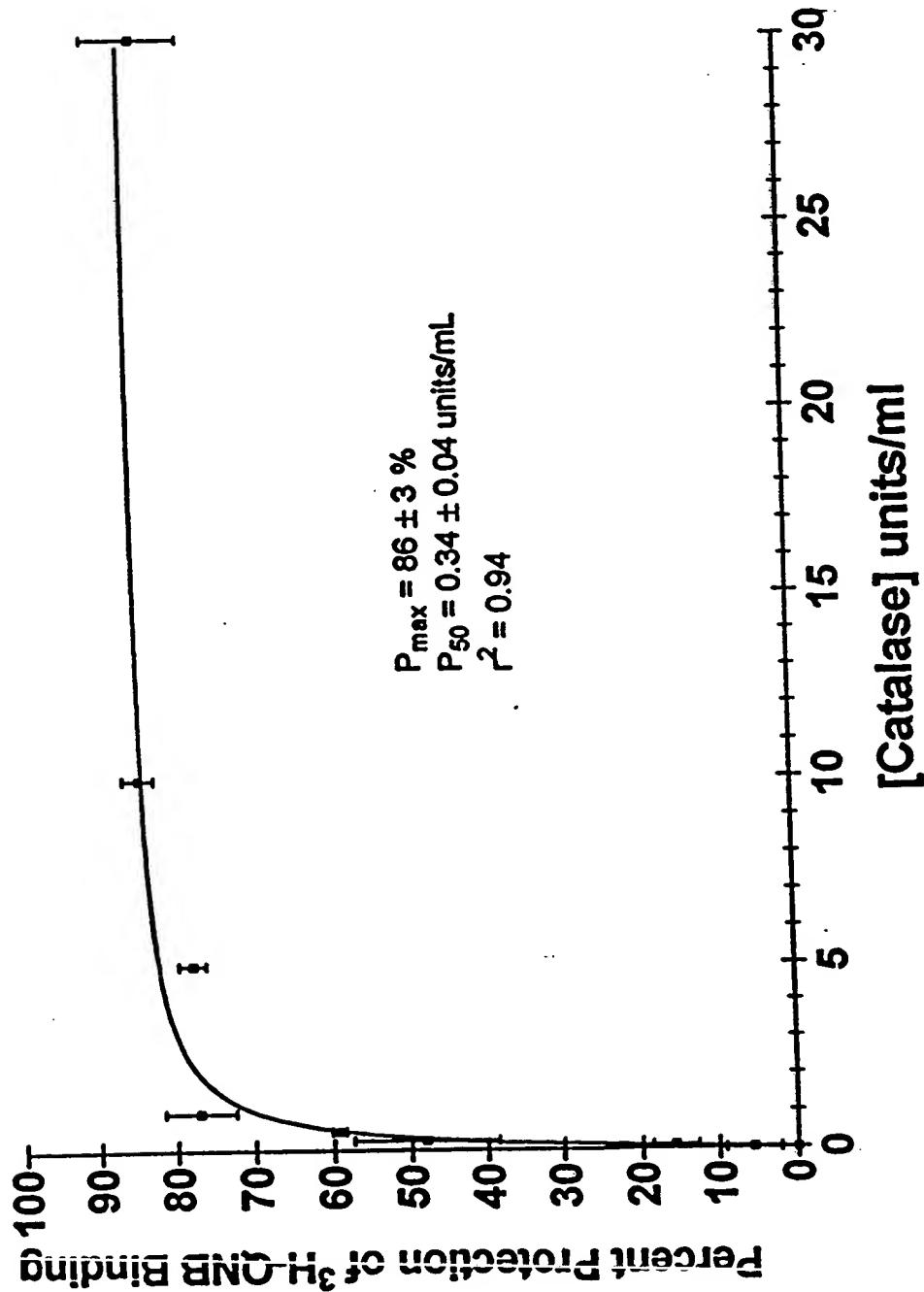


FIGURE 16



Title: METHODS AND COMPOSITIONS FOR ENHANCING CELLULAR FUNCTION
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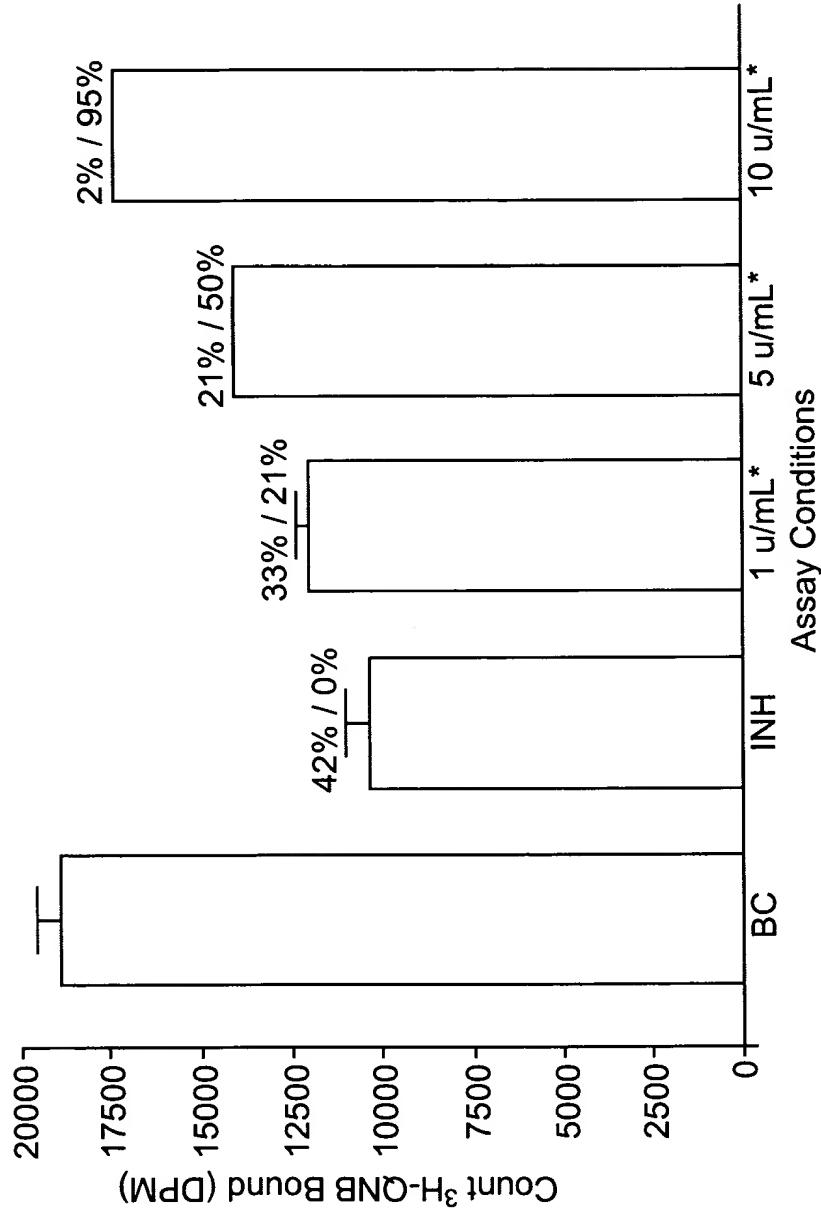
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Glutathione peroxidase protects the mAChR from inactivation
by the LMW Inhibitor



*Glutathione peroxidase concentration in the presence of the LMW Inhibitor
Percentages represent: Percent inhibition / Percent Protection

FIGURE 17



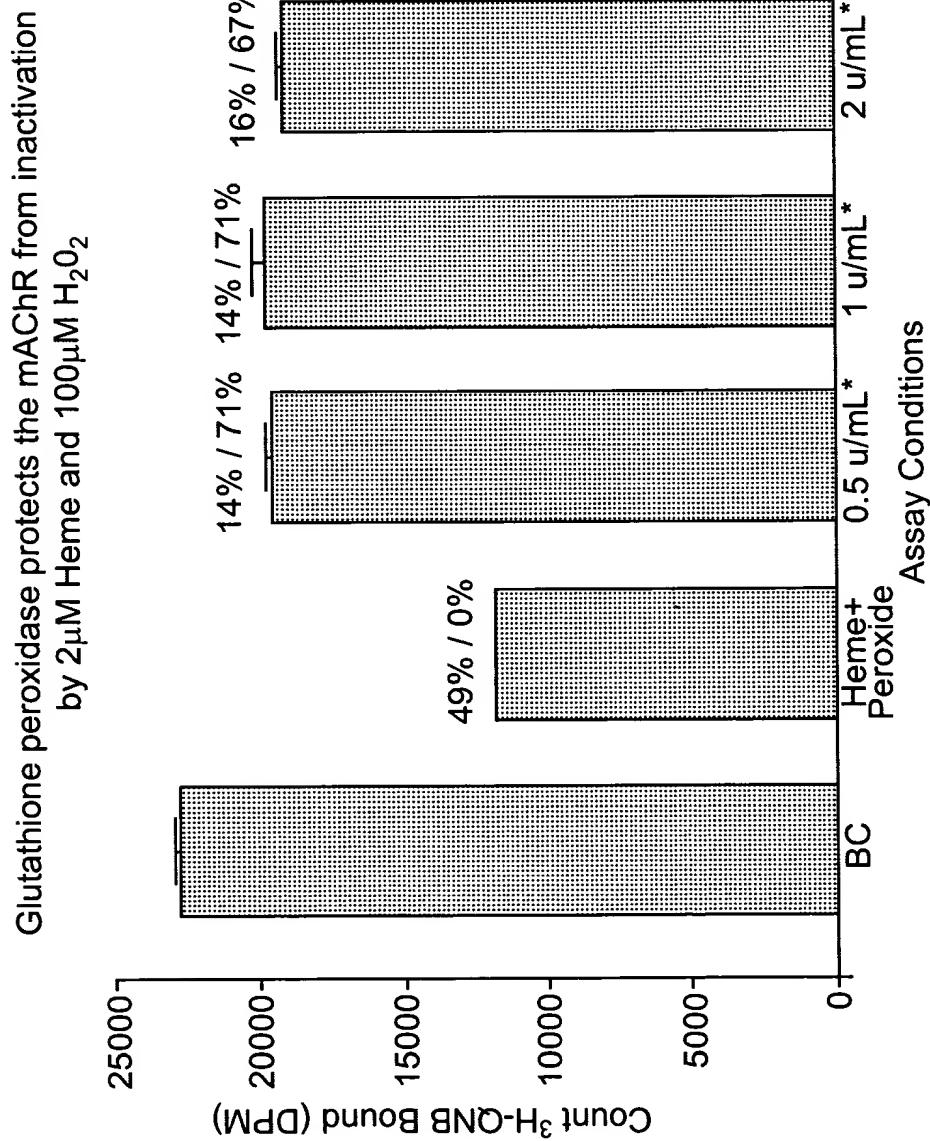
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*Glutathione peroxidase concentration in the presence of Heme and Peroxide
Percentages represent: Percent inhibition / Percent Protection

FIGURE 18



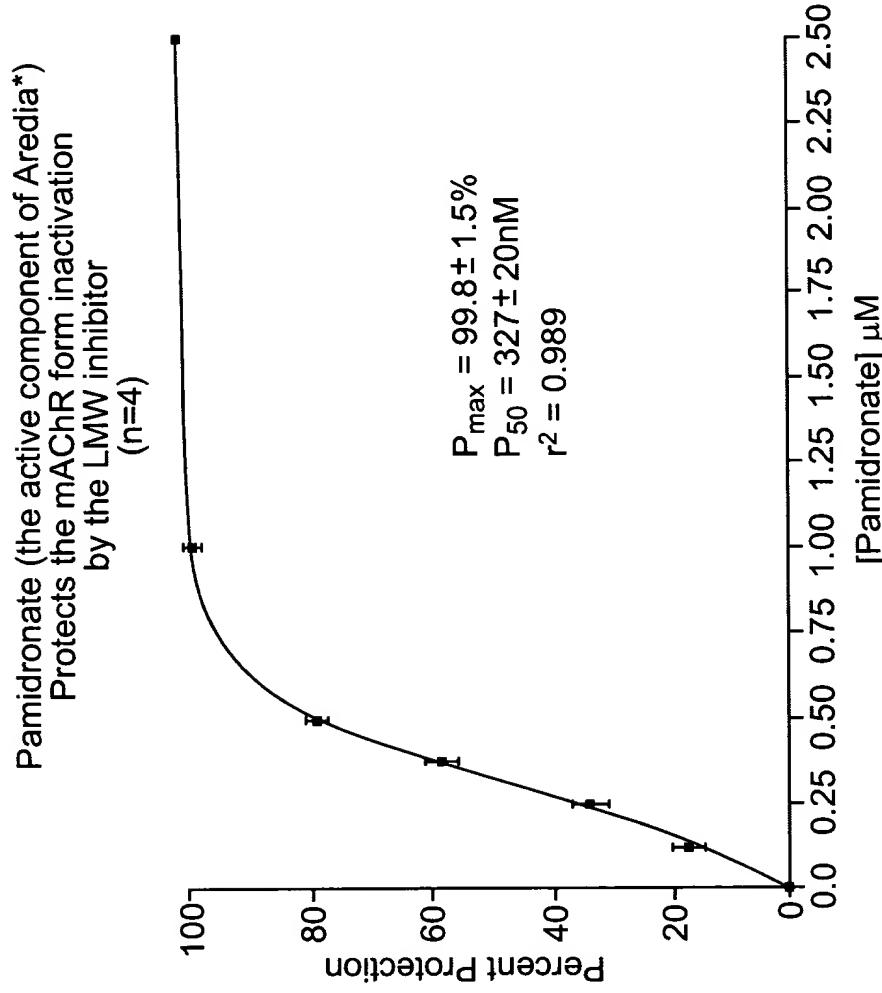
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*Aredia is a drug manufactured by Novartis and is a bone-resorption inhibitor for treatment of hypercalcemia. All assay tubes contained 7.94 mM Mannitol a component of Aredia which had no effect on binding or inhibition.

FIGURE 19



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Pyrophosphate Protects the mAChR
from damage by 160 μ M PbCl₂

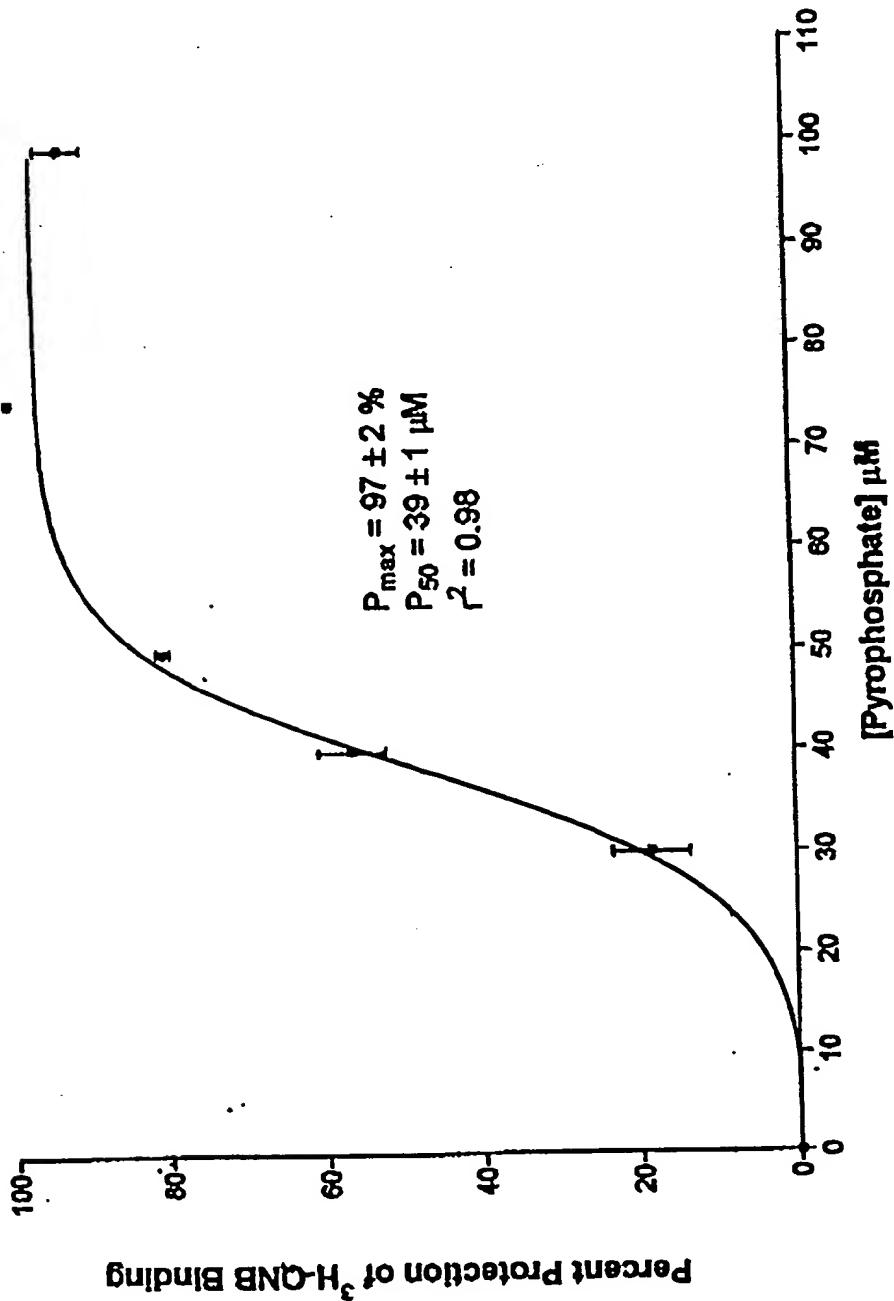


FIGURE 20

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